

**AMENDMENTS TO THE CLAIMS**

1-3 cancelled

4. (Currently amended) A reactor for the reaction of C<sub>1-4</sub>-alkanols with ammonia in the gas phase for preparing alkylamines, which comprises a shape-selective fixed-bed catalyst which is present as a single contiguous fixed bed in the reactor and through whose interior tubes through which a coolant can be passed run, wherein cooling is carried out by means of boiling water cooling such that the difference between outlet temperature and inlet temperature of the reactor in less than 35°C.

5 -19 Cancelled

20. (Previously presented) The reactor as claimed in claim 4, where monomethylamine and dimethylamine are prepared from the reactor.

21. Cancelled

22. Cancelled

23. (Previously presented) The reactor as claimed in claim 4, where the tubes have a cross section which does not have any corners.

24. (Currently amended) The reactor as claimed in claim 23, where the tube cross section is circular or ellipsoidal ~~and the tube diameter is preferably from 1 to 5 cm.~~

25. (New) The reactor as claimed in claim 23, where the tube cross section is circular or ellipsoidal and the tube diameter is from 1 to 5 cm.